Critical Thinking → CONCEPT FILE

Cell Structures

Background

Cells

- are the basic units of living things
- are protected by a membrane
- are also protected by a tough outer wall (plant cells)

Vocabulary

Check your understanding—these terms are explained on this page.

- ❒ **chromosomes**
- ❒ **cytoplasm**
- ❒ **endoplasmic reticulum**
- ❒ **membrane**
- ❒ **nuclear membrane**
- ❒ **nucleus**
- ❒ **protein**
- ❒ **ribosomes**
- ❒ **vacuole**

Two Main Areas of the Cell

Nucleus

The nucleus

- is surrounded by a nuclear membrane
- is the control center of the cell
- stores special cell information in chromosomes, tiny threadlike structures seen during cell reproduction

Cytoplasm

The cytoplasm is the place of many cell activities and structures.

- Mitochondria are the "powerhouses," making & storing energy.
- The "building blocks" of cells (proteins) are manufactured by ribosomes (located along the endoplasmic reticulum).
- Cell substances are transported on a network called the endoplasmic reticulum.
- Plant cells have vacuoles in which cell materials are stored.
- Food is made in the chloroplasts of plant cells.

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Concept Map: Cell Structures

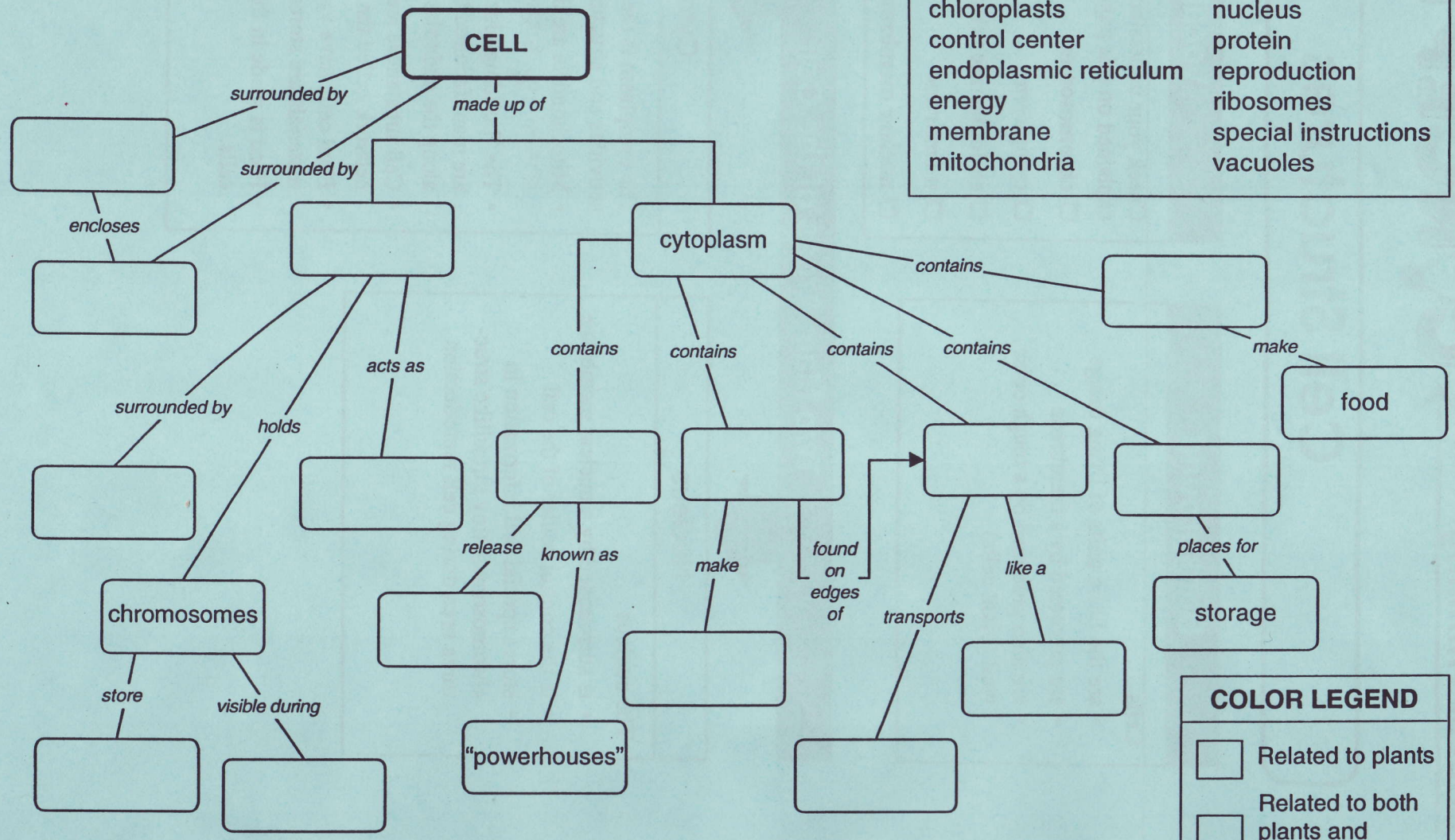
Name _____

Date _____ Period ____

Directions: Select words from the word list and fill in the blank map items. Use each word only once, and use all the words on the list. Then use two different highlighters, colored pencils, or crayons to color in items that are (1) strictly related to plants and (2) are related to both plants and animals. Show your color scheme in the legend.

WORD LIST

cell substances	network
cell wall	nuclear membrane
chloroplasts	nucleus
control center	protein
endoplasmic reticulum	reproduction
energy	ribosomes
membrane	special instructions
mitochondria	vacuoles



COLOR LEGEND

- Related to plants
- Related to both plants and animals

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